

**CLAIMS**

We claim:

1        1. A method for identifying erroneous transactions that occur during processor  
2        architecture verification testing, the method comprising:

3        monitoring an interface;

4        determining information related to termination of a test case; and

5        after the test case has terminated, identifying an incomplete transaction that should  
6        have completed prior to termination of the test case.

1        2. The method of claim 1, wherein monitoring an interface comprises monitoring  
2        a point-to-point (P2P) link network.

1        3. The method of claim 1, wherein monitoring an interface comprises monitoring  
2        a point-to-point (P2P) link network of a register transfer language (RTL) simulator.

1        4. The method of claim 1, wherein determining information related to  
2        termination of a test case comprises detecting a break signal asserted on the interface.

1        5. The method of claim 1, wherein determining information related to  
2        termination of a test case comprises receiving an indication that a test model has stopped  
3        processing.

1        6. The method of claim 1, wherein identifying an incomplete transaction  
2        comprises consulting a pending transactions list.

1           7.     The method of claim 6, wherein identifying an incomplete transaction further  
2     comprises filtering out pending transactions of a type that does not likely indicate an error.

1           8.     The method of claim 7, wherein filtering out pending transactions comprises  
2     disregarding at least one of transactions having a start time on or after the time at which a  
3     break signal was asserted and transactions that occur as a result of a break command being  
4     issued.

1           9.     The method of claim 7, wherein identifying an incomplete transaction further  
2     comprises flagging all pending transactions other than those that were filtered out.

1           10.    The method of claim 9, wherein flagging all other transactions comprises  
2     alerting a user as to the existence of the pending transactions and providing information to the  
3     user that can be used to determine the reason why those transactions did not complete.

1           11.    The method of claim 10, wherein providing information comprises at least one  
2     of providing all completed packets associated with the transactions and providing a summary  
3     of each transaction that describes all processing associated with each transaction.

1           12.    A system for identifying erroneous transactions, the system comprising:  
2     means for monitoring all ports of an interface;  
3     means for determining information related to termination of a test case; and  
4     means for identifying an incomplete transaction that should have completed prior to  
5     termination of the test case.

1           13. The system of claim 12, wherein the means for monitoring comprise means  
2 for monitoring a point-to-point (P2P) link network of a register transfer language (RTL)  
3 simulator.

1           14. The system of claim 12, wherein the means for determining information  
2 comprise means for detecting break signals asserted on the interface.

1           15. The system of claim 12, wherein the means for determining information  
2 comprise means for receiving an indication that a test model has stopped processing.

1           16. The system of claim 12, wherein the means for identifying an incomplete  
2 transaction comprise a pending transactions list.

1           17. The system of claim 16, wherein the means for identifying an incomplete  
2 transaction comprise means for disregarding at least one of transactions having a start time on  
3 or after the time at which a break signal was asserted and transactions that occur as a result of  
4 a break command being issued.

1           18. The system of claim 12, wherein the means for identifying an incomplete  
2 transaction comprise means for flagging all pending transactions that are determined to be  
3 erroneous.

1           19. The system of claim 18, wherein the means for flagging comprise means for at  
2 least one of providing all completed packets associated with the transactions and providing a  
3 summary of each transaction that describes all processing associated with each transaction.

1           20. A virtual bus interface (VBI) stored on a computer-readable medium, the VBI

2 comprising:

3           logic configured to monitor a point-to-point (P2P) interface;

4           logic configured to determine a time at which a break signal was asserted;

5           logic configured to identify transactions that are pending after the break signal was

6 asserted; and

7           logic configured to determine which of the pending transactions are erroneous.

1           21. The VBI of claim 20, wherein the logic configured to identify transactions

2 comprises logic configured to consult a pending transactions list.

1           22. The VBI of claim 20, wherein the logic configured to determine comprises

2 logic configured to filter out pending transactions of a type that does not likely indicate an  
3 error.

1           23. The VBI of claim 22, wherein the logic configured to filter out pending

2 transactions comprises logic configured to disregard at least one of transactions having a start  
3 time on or after the time at which the break signal was asserted and transactions that occur as  
4 a result of a break command being issued.

1           24. The VBI of claim 20, further comprising logic configured to flag erroneous

2 transactions.

1           25. The VBI of claim 24, wherein the logic configured to flag comprises logic  
2 configured to alert a user as to the existence of the erroneous transactions and logic  
3 configured to provide information to the user that can be used to determine the reason why  
4 those transactions did not complete.

1           26. A processor architecture verification system, comprising:  
2           a register transfer language (RTL) simulator that simulates operation of a processor  
3 and generates a first output in a first format, the RTL simulator including an interface;  
4           a golden simulator that simulates operation of the processor and generates a second  
5 output in a second format;  
6           a translator that translates at least one of the outputs for comparison with the other  
7 output, the translator including a virtual bus interface (VBI) that comprises logic configured  
8 to monitor a point-to-point (P2P) interface, logic configured to determine a time at which a  
9 break signal was asserted, logic configured to identify transactions that are pending after a  
10 break command was issued, and logic configured to determine which of the pending  
11 transactions are erroneous; and  
12           a comparator that compares the first and second outputs after translation of the at least  
13 one output.

1           27. The system of claim 26, wherein the logic configured to identify transactions  
2 comprises logic configured to consult a pending transactions list.

1           28. The system of claim 26, wherein the logic configured to determine comprises  
2 logic configured to filter out pending transactions of a type that does not likely indicate an  
3 error.

1           29. The system of claim 26, wherein the logic configured to filter out pending  
2 transactions comprises logic configured to disregard at least one of transactions having a start  
3 time on or after the time at which the break signal was asserted and transactions that occur as  
4 a result of a break command being issued.